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A CASE OF LEUKÆMIC RETINITIS.

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Hirschberg (*Centralbl. f. prak. Augenheilk.*, April, 1887) describes a case of leukæmic retinitis in which the visual sensations were the first symptoms complained of and where the ophthalmoscope led to a diagnosis. Briefly, Hirschberg's case was as follows: The patient, a male aged 33, presented himself because there constantly appeared before his right eye, when looking upon white paper, a dark, balloon-like figure. A central hæmorrhage was found, and in addition numerous minute hæmorrhages studded the retina. A month later a precisely similar appearance was found in the left retina. The discs now became blurred, and the veins were surrounded by white margins, while white patches appeared in the retinæ. The spleen was enlarged and this enlargement was progressive and uninfluenced by treatment. The bones were tender. On examination of the blood the white corpuscles were found about equal in number to the red.

Inasmuch as leucocythæmic retinitis is a rare affection, the record of a case which has recently come under my notice may prove interesting. This is the more true because as in Hirschberg's case the visual sensations were the first symptoms which caused the patient to come to the hospital for treatment.

Charles G———, aged 21, presented himself in the Eye Dispensary of the University Hospital, December, 1885. He

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was a school-teacher by occupation. For some time he had suffered with pain in and around the eyes, most marked upon the left side. Before the left eye there was constantly present a bluish spot, one inch in diameter, when he looked at white paper held ten inches before his eyes. The edges of this spot merged on either side into areas of indistinct vision. *O. D.* Vision $^{20}/_{1}$. Nerve margins indistinct, especially at the lower and outer border. Full, broad, tortuous veins; arteries pale, about normal in calibre. Along the course of many vessels yellowish patches and occasionally linear hæmorrhages, Overlying the upper temporal vein a blackish mass, the remains of a former hæmorrhage. Near the outer margin of the disc several striated hemorrhages. In the macular region numerous small, yellowish patches and fine, striated hæmorrhages. The macula surrounded a red-brown margin, within which were gathered numerous white dots and lines, more or less radially arranged around the fovea. *O. S.* Vision $^{20}/_{c}$. Nerve margins much more obscured and the discs distinctly swollen. Veins full, pale and tortuous and along the upper temporal vessels a large hæmorrhage. Retina more diffusely infiltrated with yellowish-white patches, the macular region occupied by a large brownish patch, having fringed edges, the seat of a former hæmorrhage.

Some questions elicited that he had had chills and fever, and for some time had suffered from what he supposed was "dumb ague," pain in the back, headache, nausea, etc. He was required to pass urine in the Dispensary, and this when tested showed distinct albumen reaction. Although the retinæ by no means exhibited the appearances found in a typical case of albuminuric retinitis, the presence of albumen in the urine and the lesions in the right macula led me to believe the case was one of kidney origin. Constitutional treatment was ordered, the man returned once or twice and then disappeared from observation for a little more than a year. After the lapse of this time he reappeared, and presented much more marked constitutional disturbances and an increase in the retinal changes. The broad, pale, tortuous retinal veins,

the orange yellow choroid, numerous fresh hæmorrhages and the remains of old ones, the white and yellowish patches in the retinæ and the increased opacity and swelling of the discs presented a striking and characteristic ophthalmoscopic picture. The patient was referred to Prof. W. Osler for general treatment, who admitted him to the Medical Wards of the University Hospital and from whose subsequent examinations and records I am kindly permitted to quote.

In addition to the history already recorded it may be added that as a lad this patient was healthy. When twelve years of age he had a prolonged attack of intermittent fever. During 1885 he had the afternoon headache, nausea and malaise of which he spoke when he paid his first visit to the Eye Dispensary. After that, up to the time of his second visit, his chief general symptoms were giddiness, progressive weakness and for three months afternoon fever and heavy sweats. He had frequent attacks of epistaxis and bleeding from the gums. Deafness in both ears developed, and this has remained in the left ear. He has had occasional attacks of diarrhœa and gradual increase in the size of the abdomen. During the last three months before his admission he has felt better, but the nose bleeding continued. His father and all his family are bleeders. There were no cardiaç murmurs: the sounds at apex and base were clear. At the base of the neck the sounds were somewhat ringing. The abdomen was greatly swollen and this swelling was most marked upon the left side, due to the presence of an enormously enlarged *spleen*, which existed as a solid mass reaching almost to the symphysis The *liver* dulness in the nipple line was from the upper border of the sixth rib to just below the costal arch. The *lymphatics* were nowhere enlarged and the bones were not increased in size or tender. Numerous examinations of the *blood* were made. The blood drop was creamy in consistence and of a reddish-brown color. On the day of his admission the examination of the blood yielded the following result:

Red blood corpuscles, 2,470,000.

White blood corpuscles, 617,500.

White to red as 1 to 4.

Two weeks later there were 1 white to 3.62 red and the hæmoglobine was 32%. Ten days later there was 1 white to 2.58 red, and three weeks later the proportion was 1 white to 5.08 red and the hæmoglobine had risen to 40%. The temperature varied from the normal to a little over 100° F. The quantity of urine voided in twenty-four hours was from eleven to eighty-seven ounces and, as before stated, at the first examination contained albumen. There was distinct amelioration in some of the symptoms under treatment, but the patient left the hospital and is not now under observation.

The case[1] just detailed was one of splenic leucocythæmia, to which variety of this disease the retinal changes are almost exclusively confined. As is usual, the one eye was more affected than its fellow. Manifestly two points of interest present themselves for consideration. This patient, although knowing that his general health was below par, came for treatment because of subjective visual sensations, viz., a dark spot before the left eye, fully explained by the large, old, fringed macular hæmorrhage. At the first examination the true nature of the disease was not fully determined, because the retinitis, although not typical, was supposed, on account of the albuminous urine, to be uræmic in origin. Moreover, the right macula certainly exhibited changes similar in appearance to such as are found in primary renal disease, as well as those related to the blood state. This association has been noted and a case in illustration is figured by Poncet (Perrin and Poncet. "Atlas," p. 66, quoted by Gowers's Med. Ophthalmoscopy, 2d edition, p. 217). Organic kidney disease in this patient was, however, not necessarily a complication, as the presence of the albumen may easily be explained by a mechanical hyperæmia of the kidney due to the pressure exerted by the enormously enlarged spleen upon the renal veins.

[1] I have already referred to this case in a discussion on Leucocythæmia before the County Medical Society of Philadelphia. Proceedings of the County Medical Society of Philadelphia, Vol. VIII, p. 152, 1887.